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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,720	12/31/2003	Harold A. Luetngen	2056/US/2	1370

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EXAMINER

DONAHOE, CASEY D

ART UNIT	PAPER NUMBER
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3732

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/750,720	LUETTGEN ET AL.	
	Examiner	Art Unit	
	Casey Donahoe	3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 15-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/13/05, 12/14/04, 10/12/01, 8/9/04</u> | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanan (US 6,609,910) in view of Marcon et al. (US 2002/0112737)

Narayanan discloses a tip for a power dental flossing device including a base portion, a central portion having a rectangular cross-section, and an end portion for insertion between adjacent teeth. Narayanan fails to disclose a whitening compound enclosing the end portion. Marcon et al. discloses a dental floss including compounds of both chemical and abrasive whitening agents. The compound may include a calcium carbonate abrasive abrading agent (paragraphs 59-61) as well as chemical agents such as peroxide compounds (paragraphs 64-66). Furthermore, the compound may include a flavoring agent (paragraphs 49-50). Polymers may be used to bind the ingredients to the floss (paragraphs 37-38). Marcon et al. also discloses the use of emulsifiers in their whitening compound (paragraphs 39-41), which act as foaming agents and

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cause the compound to foam upon contact with saliva. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the flossing tip disclosed by Narayanan with the whitening compound disclosed by Marcon et al. in order that the flossing tip may provide the additional benefit of whitening while cleaning the teeth.

Claims 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanan in view of Marcon et al. as applied to claims 1-3 and 5-9 above, and further in view of Brown (US 6,609,527).

Narayanan discloses the flosser tip described above and Marcon et al. discloses a whitening compound for use thereon, but fails to explicitly disclose that the whitening compound dissolves upon contact with saliva. However, it is well known in the art for whitening compounds to dissolve within saliva in order that the saliva may activate and carry the active ingredients from the floss to the surface of the teeth. For instance, Brown discloses an active floss wherein the coating is explicitly disclosed to be saliva soluble (abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to make the whitening compound disclosed by Marcon et al. saliva soluble in order to dispense the active ingredients via saliva to the teeth.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanan in view of Marcon et al. as applied to claims 1-3 and 5-9 above, and further in view of Hassan et al. (US 5,851,514).

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Narayanan discloses the flosser tip described above and Marcon et al. discloses a whitening compound for use thereon, but fails to explicitly disclose that its whitening compound includes a drying retardant agent, acrylic prepolymer, or wetting agent. Wetting agents are well known in the tooth whitening art because they help the whitening formula to react with saliva and spread over the teeth. For instance, Hassan et al. disclose a whitening compound which explicitly states it includes a wetting agent (column 5, line 1). Drying retardant agents are further well known components because they prevent the premature drying of the whitening compound which would stop the chemical reactions with the saliva and end the chemical whitening reactions. Although, Marcon et al. does not explicitly disclose a wetting agent or drying retardant agent, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a wetting agent and drying retardant agent in the compound (if not already done so) in order that the chemical whitening reaction disclosed may take place more efficiently by spreading the compound and increasing the effective lifetime of the flosser tip. Marcon et al. does disclose the use of various binders well known in the art but does not specify an acrylic prepolymer. Because acrylic prepolymers are known in the art and Applicant has not disclosed a particular advantage of this binder over other binders, it constitutes an obvious choice of binder. It would have been obvious to one of ordinary skill in the art at the time of the invention to use an acrylic prepolymer as a binder because it is known in the art.

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Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naryanan in view of Marcon et al. and Hassan et al. as applied to claims 1-3, 5-9, and 16 above, and further in view of Chiang et al. (US 5,875,797) and Cutler (US 5,900,230).

Narayanan discloses the flosser tip described above and Marcon et al. discloses a whitening compound for use thereon, but fails to explicitly disclose that its whitening compound includes a white filler or thickener, or that the abrasive is sylodent 700. However, both thickeners and fillers are known components of whitening compounds and sylodent 700 is an obvious choice for an abrasive. Chiang et al. discloses a dental floss including a particulate filler to which the ingredients are adsorbed (column 2, lines 1-3; claim 16). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a white filler in the whitening composition in order to combine the multiple ingredients. Furthermore, Cutler explicitly discloses the use of slodent 15 as a thickening agent and the use of sylodent 700 as an abrasive agent (table 1, column 6). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a thickener to adjust the viscosity of the whitening compound to a desired level and to use sylodent 700 as an abrasive agent because it is an obvious choice which has tested to work well according to Cutler.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Naryanan in view of Marcon et al, Hassan et al., Chiang et al. and Cutler as

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applied to claims 1-3, 5-9, and 16-19 above, and further in view of Dolan et al.

(US 5,518,012).

Narayanan discloses the flosser tip described above and Marcon et al. discloses a whitening compound for use thereon, but fails to explicitly disclose that its whitening compound includes an anti-microbial solution. Dolan et al. discloses dental floss with an antimicrobial agent (column 10, line 6), inherently to kill microbes in the mouth that damage the teeth and cause periodontal disease. It would have been obvious to one of ordinary skill in the art at the time of the invention to add an antimicrobial solution to the flossing tip disclosed by Narayanan in order to additionally kill microbes in the user's mouth and provide a fuller cleaning benefit.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Dave et al. (US 2004/0063603) and Montgomery (US 2002/0137728) are made of record.

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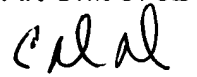
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Casey Donahoe whose telephone number is (571) 272-2812. The examiner can normally be reached on Monday - Thursday (7:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272 -4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ralph A. Lewis
Primary Examiner
AU 3732

Casey Donahoe
Examiner
Art Unit 3732


4/17/06